

**The local 5-min oscillations in granules and
intergranular lanes: observations and theory.**

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Differences in the amplitudes, phases and periods of the five-minute oscillations above granules and intergranular lanes are found to be well-described in a frame of a relatively simple model. We utilized a 3D snapshot of the theoretically computed time depended solar model atmosphere. We considered a vertical monochromatic wave propagation in a moving, isothermal medium. NLTE synthesis of a time series of the FeI 5324 Å line profiles in the model atmospheres from a horizontal cut of the snapshot was performed taking into account granular and oscillatory components of the velocity field. Observations of the FeI 5324 Å line in a quite solar disk center and our theoretical modeling lead to the similar results:

- Periods of oscillations in intergranular lanes are lower than in granules;
- Amplitudes of the velocity oscillations grow with the contrast of granulation. Amplitudes of the intensity oscillations are larger in intergranular lanes than in granules;
- Velocity oscillations at the lower levels of the atmosphere lead oscillations at the outer layers in intergranular lanes. In granules this phase shift is nearly zero.

The fact that our simple model describes the basics features of the oscillations above granules and intergranular lanes made us come to the conclusion that differences in those oscillations are caused mainly by variations of the physical conditions in these structures.